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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,762	10/11/2001	Toshiya Shimura	NU-01021	7580

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EXAMINER

TAYLOR, BARRY W

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 04/10/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/973,762

Applicant(s)

SHIMURA ET AL.

Examiner

Barry W Taylor

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \*   c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 5 recites the limitation "said noise level measuring means" in first two lines of claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "said decision means" in first two lines of claim.

There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Koeman et al (5,731,706 hereinafter Koeman).

Regarding claims 1 and 3. Koeman teaches a system for measuring cross-talk (Title, abstract) comprising:

pulling means included in an outside line of an xDSL circuit installed in an office for pulling a subscriber line (see switch matrix 200 figures 5-6);

noise level measuring means for measuring a level of cross-talk noise on the subscriber line (see receiver 208 and 218 in figures 5-6); and

decision means for determining, based on the level of cross-talk noise measured, whether or not the subscriber line is usable (see microprocessor 212 figures 5-6 wherein signals are provide to the microprocessor allowing the microprocessor to determine whether or not the subscriber line is usable or not by comparing the values to a look-up table---see 54 figures 5-6).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 2 and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koeman et al (5,731,706 hereinafter Koeman) in view of Benedict et al (6,453,015 hereinafter Benedict).

Regarding claim 4. Koeman does not explicitly show MDF. However, Koeman discloses using a switch matrix 200 figures 5-6 for selecting a set of wire pairs 1-4 to be tested.

Benedict teaches an electronic relay matrix (22 figure 3) connectable between a plurality of customer telephone lines and a plurality of testers (2, 20 figure 3). The electronic relay matrix (22 figure 3) includes a line matrix (80 figure 3) having a plurality of relay assemblies (82 figure 3). Each relay assembly (82 figure 3) in a relaxed state connects together the line-side (12 figure 3) and the drop-side (8 figure 3) of one of the customer telephone lines. Each relay assembly (82 figure 3) is adjustable to enable one of the plurality of testers (2, 20 figure 3) to be connected to the drop-side (8 figure 3) and/or the line side (12 figure 3) of a desired customer telephone line enabling telephone companies and rival telephone companies the ability to test telephone lines leased to rival telephone companies using either a telephone company or rival telephone company tester (entire disclosure).

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to modify the invention as taught by Koeman to use an electronic relay matrix as taught by Benedict for the benefit of allowing telephone companies and rival telephone companies the ability to test telephone lines leased to rival telephone companies using either a telephone company or rival telephone company tester as taught by Benedict.

Regarding claims 5 and 7. Koeman teaches wherein the noise level measuring means comprises:

a voltage measuring circuit for measuring cross-talk noise voltage input via relays (see figures 5-6 wherein a signal source 202 produces stimulus signal input via relay matrix 200 and measuring circuit (i.e. RECEIVER) receives response signal and converts the response signal to a digital signal 208 and transforms the digital signal to noise spectrum by using FFT processor 210); and

an ADC circuit ... (see figures 5-6 wherein a signal source 202 produces stimulus signal input via relay matrix 200 and measuring circuit (i.e. RECEIVER) receives response signal and converts the response signal to a digital signal 208 and transforms the digital signal to noise spectrum by using FFT processor 210); and

an FFT circuit ... (see figures 5-6 wherein a signal source 202 produces stimulus signal input via relay matrix 200 and measuring circuit (i.e. RECEIVER) receives response signal and converts the response signal to a digital signal 208 and transforms the digital signal to noise spectrum by using FFT processor 210).

Regarding claims 6 and 8. Koeman teaches wherein the decision means comprises means for comparing the noise spectrum data with a template for noise level decision to thereby determining whether or not the subscriber line is usable (see figures 5-6 wherein a look-up table (i.e. template) is used for comparing the FFT signal (i.e. noise spectrum) to values stored in look-up table 54).


Claim 2 is rejected for the same reasons as claims 5-6 and 7-8 listed above since claim 2 is a combination of claims 5-6 or 7-8.

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barry W. Taylor whose telephone number is (703) 305-4811. The examiner can normally be reached on Monday-Friday from 6:30am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on (703) 305-4708. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Technology Center 2600 customer service Office whose telephone number is (703) 306-0377.

  
CURTIS KUNTZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600